How can I send a secret message?

Materials:

- a large sheet of paper (A3)
- scissors
- cylindrical household items with different diameters, such as a roll of foil, toilet paper roll, rolling pin, …(at least two)
- adhesive tape
- pencils

Preparation

1. Cut a long, narrow strip from the sheet of paper.
2. Choose a roll. Wrap the paper strip around the roll so that this is covered as best as possible (Figure 1).
3. Fix the beginning and end of the strip with a piece of adhesive tape (Figure 2).
4. Write your "message" across the strip. You can also draw something (Figure 3).

Abbildung 1   Abbildung 2   Abbildung 3   Abbildung 4

Experiment:

Carefully unwrap the message from the roll and wrap it around a thicker or a thinner roll (Figure 4).

Now if you try to read the message, what do you find?

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How can I send a secret message?

Do you have an idea why this could be?

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- ➢ Send the message to a friend.
- ➢ What does this friend really need to know?
- ➢ What is the „key" to your secret message?

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Where do we use „keys"?

In our everyday lives we need so-called "keys" to be able to access some forms of information. You may know this from a PC or mobile phone. We don't always want everyone to be able to read our messages. That is why many mobile phones or PCs have an access key or unlock code.

A long time ago in Greece important messages were sent using a "scytale", one of the oldest known encryption methods.

Scytale comes from ancient Greek and means "cylinder" or "stick". It later got the further meaning of "message".
This "Skytale" was used to deliver encrypted, secret messages.

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